

UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	CV 14-1645-GW(MRWx)	Date	January 29, 2015
Title	<i>Fontem Ventures, B.V., et al. v. NJOY, Inc., et al.</i>		

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Present: The Honorable	GEORGE H. WU, UNITED STATES DISTRICT JUDGE
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Javier Gonzalez

None Present

Deputy Clerk

Court Reporter / Recorder

Tape No.

Attorneys Present for Plaintiffs:

Attorneys Present for Defendants:

None Present

None Present

**PROCEEDINGS (IN CHAMBERS): RULINGS ON CLAIMS CONSTRUCTION**

The Court's Rulings on Claims Construction is attached hereto.

Initials of Preparer JG

**Fontem Ventures, B.V., et al. v. NJOY, Inc.**; Consolidated Case No. CV-14-1645-GW(MRWx);  
Rulings on Claims Construction

**I. Introduction**

The Court is presiding over three waves of patent infringement cases filed by Fontem Ventures, B.V. and Fontem Holdings 1, B.V. (“Plaintiffs”) against NJOY, Inc., CB Distributors, Inc., Vapor Corp., FIN Branding Group, LLC, Ballantyne Brands, LLC, Spark Industries, LLC, Logic Technology Development, LLC, and VMR Products, LLC (“Defendants”), which have now all been consolidated under Case No. CV-14-1645. While filed against different defendants and asserting multiple patents, the cases all involve the same basic charge: that Defendants are infringing Plaintiffs’ electronic-cigarette patents.

At issue in these claim construction proceedings are five patents – the “‘331 patent,”<sup>1</sup> “‘628 patent,”<sup>2</sup> “‘742 patent,”<sup>3</sup> “‘957 patent,”<sup>4</sup> and “‘805 patent”<sup>5</sup> – originally issued to Lik Hon (“Hon”), and later assigned to or exclusively licensed by Plaintiffs. The ‘628 patent, which issued in July 2013, is a continuation of the ‘331 patent, which issued in March 2013. Both claim priority through a March 2005 Patent Cooperation Treaty (“PCT”) application and share a common written description. The ‘742 and ‘957 patents, issued in February 2013, are also related, but trace priority through different PCT applications filed in May 2007.<sup>6</sup> The ‘805 patent, issued in April 2014, is unrelated to the other patents, but traces priority through a January 2010 PCT application, and is a continuation of a now-abandoned U.S. application filed in August 2011.

Per the Court’s instruction, the parties initially identified 15 claims for construction, two of which they later withdrew. *See* Docket Nos. 28, 34, 49-1. Cross briefing followed, with the parties filing opening positions in early November 2014. *See* Docket No. 37, Plaintiffs’ Opening Claim Construction Brief (“Pl. Opening Br.”); Docket No. 40-1, Defendants’ Opening Claim Construction Brief (“Def. Opening Br.”). The parties filed responses in late November 2014, and presented the Court with a live technology tutorial in early 2015, two weeks before this *Markman* hearing. *See* Docket No. 46, Defendants’ Responsive Claim Construction Brief (“Def. Resp. Br.”); Docket No. 47, Plaintiffs’ Responsive Claim Construction Brief (“Pl. Resp. Br.”).

**II. Legal Standard**

Claim construction is an interpretive issue “exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). It is “a question of law in the

<sup>1</sup> *See* Docket No. 39-14, U.S. Patent No. 8,393,331, entitled “Electronic Atomization Cigarette.”

<sup>2</sup> *See* Docket No. 39-15, U.S. Patent No. 8,490,628, entitled “Electronic Atomization Cigarette.”

<sup>3</sup> *See* Docket No. 39-12, U.S. Patent No. 8,365,742, entitled “Aerosol Electronic Cigarette.”

<sup>4</sup> *See* Docket No. 39-13, U.S. Patent No. 8,375,957, entitled “Electronic Cigarette.”

<sup>5</sup> *See* Docket No. 39-16, U.S. Patent No. 8,689,805, entitled “Electronic Cigarette.”

<sup>6</sup> The ‘742 patent is a divisional of U.S Patent No. 8,156,944 patent, portions of which the PTO recently held invalid during *inter partes* review. *See* Case No. CV-14-1649, Docket No. 36.

way that we treat document construction as a question of law,” with subsidiary fact-finding reviewed for clear error pursuant to Fed. R. Civ. P. 52(a)(6). *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, \_\_\_ U.S. \_\_\_, 135 S.Ct. 831, 837 (2015). Claim construction begins with an analysis of the claim language itself. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001). That is because the claims define the scope of the claimed invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). But “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent.” *Id.* at 1313. Thus, claims “must be read in view of the specification,” which is “always highly relevant to the claim construction analysis.” *Phillips*, 415 F.3d. at 1315 (internal quotations omitted). “Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.*

Although claims are read in light of the specification, limitations from the specification must not be imported into the claims. *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998). “[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.” *Phillips*, 415 F.3d at 1323.

The prosecution history is also part of the intrinsic evidence consulted during claim construction. *See Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002). “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317 (citations omitted). “Furthermore, like the specification, the prosecution history was created by the patentee in attempting to explain and obtain the patent.” *Id.* “Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

Claim construction usually involves resolving disputes about the “ordinary and customary meaning” that the words of the claim would have had “to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13 (internal quotations and citations omitted). But in some cases, claim terms will not be given their ordinary meaning because the specification defines the term to mean something else. *Novartis Pharms. Corp. v. Abbott Labs.*, 375 F.3d. 1328, 1334 (Fed. Cir. 2004); *Kumar v. Ovonic Battery Co.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003). For the specification to provide a non-ordinary definition for a term, it must set out its definition in a manner sufficient to provide notice of the meaning to a person of ordinary skill in the art. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Where the patent itself does not make clear the meaning of a claim term, courts may look to “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean,” including the prosecution history and “extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Phillips*, 415 F.3d at 1314 (internal quotations omitted). Sometimes, the use of “technical words or phrases not commonly understood” may give rise to a factual dispute, the determination of which will precede the ultimate legal question of the significance of the facts to the construction “in the context of the specific patent claim under review.” *Teva*, 135 S.Ct. at 841, 849 (2015). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly

understood words.” *Phillips*, 415 F.3d at 1314. “In such circumstances, general purpose dictionaries may be helpful.” *Id.*

### III. Analysis

#### A. *Analysis of Disputed Claim Terms*

##### 1. “cavity” (‘331 patent, claims 1-2; ‘628 patent, claim 3)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, “a hollow space”	“a hollow space within and completely surrounded by the body of the atomizer”

As relevant, claims 1 and 2 of the ‘331 patent recite:

1. An electronic cigarette comprising:

a housing;

\*\*\*

an atomizer within the housing;

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a **cavity** arranged in the atomizer

\*\*\*

a heating element within the **cavity**.

2. An electronic cigarette, comprising:

a housing;

\*\*\*

an atomizer within the housing, with the atomizer having a heating element within a **cavity** . . . .

‘331 patent, at 4:66-6:6.

Claim 3 of the ‘628 patent recites

3. The electronic cigarette of claim 1 further including an atomization **cavity** within the atomizer.

‘628 patent, at 5:11-3.

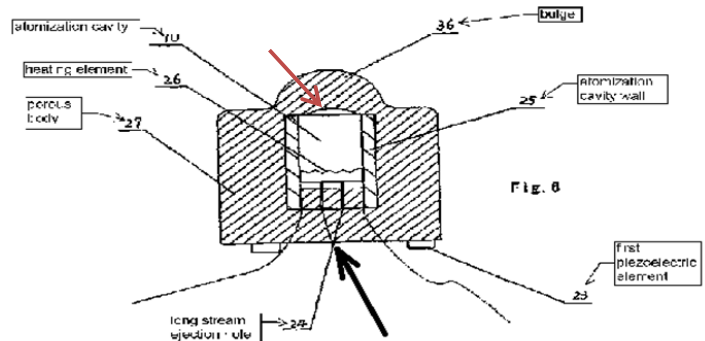
Both parties agree that “cavity” means, at least, “a hollow space.”<sup>7</sup> The central dispute is whether the term means just a “hollow space,” or instead, “a hollow space *within and completely surrounded by the atomizer*.”<sup>8</sup> Relying on the specification, Defendants advocate the latter.

<sup>7</sup> As with several other terms, Plaintiffs’ lead argument is that the Court should not construe “cavity” at all. Pl. Opening Br. at 4:17-19 (arguing that the “plain meaning of ‘cavity’ is easily understood and can be applied by a reasonable juror having no specialized knowledge of the technology at issue”). As has often been said, the purpose of claim construction “is determining the meaning and scope of the patent claims asserted to be infringed.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of [resolving] disputed meanings and technical scope [of patent claims], to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement”). While claim construction is not meant to be “an obligatory exercise in redundancy,” *id.*, the court has an obligation to determine the proper meaning and scope of claim terms where the parties raise actual disputes, *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (“[If] parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute”). “A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate when a term has more than one ‘ordinary’ meaning or when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” *Id.* at 1361. Here, as with several other terms, the Court finds that construction is necessary as the parties’ dispute impacts the scope of the disputed claims.

Before turning to the specification, however, the Court starts with the claim language. *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Claim construction begins and ends in all cases with the actual words of the claim”) (citations and quotations omitted). As relevant to this dispute, the claim language *does* limit the cavity’s location: it must be “arranged in” or “within” the atomizer. So, the claim language does not just recite a “cavity”; it always uses positional words to describe (and limit) the cavity’s location. Not included in those positional words, however, is anything about the cavity being “completely surrounded by” the atomizer. By limiting “cavity” with this positional language, but omitting the more specific “completely surrounded by,” the claim language favors Plaintiffs’ construction.

Nevertheless, Defendants contend the intrinsic evidence supports their position, arguing that the specifications describe and depict an atomization cavity completely surrounded by the atomizer. *See* Def. Opening Br. at 15:9-16:17 & Figs. 1, 6.<sup>9</sup> But this point is far from clear. First, Defendants never actually identify any language in the specifications referring to the cavity as “completely surrounded by” the atomizer (because it does not exist). They also do not cite anything from the specifications indicating that the cavity would not work if not “completely surrounded by” the atomizer. Instead, they cite language describing the “cavity wall 25 [as] surrounded with [a] porous body 27,” and interpret Figures 1 and 6 as showing the “cavity . . . completely surrounded by the body of the atomizer.” *Id.*

However, in addition to the language Defendants cite, the ‘331 patent’s specification also states: “After the atomization the droplets with large diameters stick to the wall under the action of eddy flow and are reabsorbed by the porous body 27 via the overflow hole 29. Droplets with small diameters float in stream and form aerosols, which are sucked out via the aerosol passage 12, gas vent 17, and mouthpiece 15.” ‘331 patent, at 3:56-61; *see also* ‘628 patent, at 3:55-60. While the Figures depict these components, they do not clarify how the droplets get out of the atomizer. So, it is not even clear whether the cavities in the preferred embodiments are “completely surrounded by” the atomizer, or instead, whether there is an outlet hole – for example, the long-stream ejection hole in ‘331 Figure 6, or, potentially, the space under the bulge, the significance of which the parties debated at the technology tutorial – that breaks the “completely.”



Even with the most defendant-friendly rendering, the best that can be said is that the ‘331 and ‘628 diagrams disclose a preferred embodiment with the “cavity” completely “surrounded by the atomizer,” which is insufficient justification to so limit the claims. *Phillips*, 415 F.3d at 1323. Defendants cite nothing in the specifications indicating that the cavity would not work if not “completely” surrounded. Therefore, nothing in the specification contradicts the broader meaning implied by the words of the claims themselves, which use some positional modifiers,

<sup>8</sup> Though the parties only identified “cavity” for construction, it is reasonably clear that they have asked the Court to construe the term in the context of the longer claim phrases: “a cavity arranged in the atomizer,” ‘331 patent (Claim 1), “the atomizer having a heating element within a cavity,” ‘331 Patent (Claim 2), and “atomization cavity within the atomizer,” ‘628 patent (Claim 3).

<sup>9</sup> As stated above, the ‘331 and ‘628 patents share a common written description.

but not “completely surrounded by.” Finally, Defendants’ extrinsic evidence – Merriam-Webster’s Collegiate Dictionary (812) (11th ed. 2002), and the Oxford American Dictionary and Thesaurus (1st ed. 2003) – does not even contain a “completely” limitation. Def. Opening Br. at 16:21-23. Altogether, then, Defendants seem to be asking the Court to import a limitation from their interpretation of a disclosed embodiment. As the Federal Circuit has explained, that is not generally allowed. *Phillips*, 415 F.3d at 1323; *Nazomi Commc’ns., Inc. v. Arm Holdings, PLC*, 403 F.3d 1364, 1369 (Fed. Cir. 2005). And here, it is not even clear that the preferred embodiment contains the limitation.

Thus, the Court should either adopt Plaintiffs’ construction. As used in the ‘331 and ‘628 patents, “cavity” means: “a hollow space.”

2. “*frame*” (‘742 patent, claims 1-3)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, “a support”	“an underlying, rigid structure on which the porous component is set”

As relevant, claims 1 through 3 of the ‘742 patent recite:

1. An aerosol electronic cigarette, comprising:  
... an atomizer assembly ...;

\*\*\*

the atomizer assembly is an atomizer, which includes a porous component and a heating body;

\*\*\*

the atomizer includes a **frame**;  
the porous component is supported by the **frame**;

\*\*\*

the **frame** has a run-through hole.

2. An electronic cigarette, comprising:

\*\*\*

the atomizer assembly including a porous component supported by a **frame** having a run-through hole ...

3. An electronic cigarette, comprising:

\*\*\*

the atomizer assembly includes a **frame** having a run through hole, and a porous component between the **frame** and the outlet ...

The specification further illustrates the structure and function of the “frame” as follows:

In the fifth preferred embodiment, as shown in FIGS. 17 and 18, the atomizer assembly is an atomizer (8), which includes a **frame** (82), the porous component (81) set on the **frame** (82), and the heating wire (83) wound on the porous component (81). The **frame** (82) has a run-through hole (821) on it. The porous component (81) is wound with heating wire (83) in the part that is on the side in the axial direction of the run-through hole (821).

81 – porous  
component

82 – frame

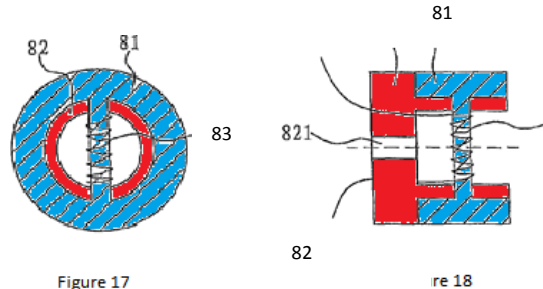


Figure 17

Figure 18

'742 patent, at 5:42-47 & Figs. 17-18.

Should the Court construe the term “frame,”<sup>10</sup> Plaintiffs contend that the Court should afford it “its plain meaning, namely, a support.” Pl. Opening Br. at 7:6-9. Defendants contend that the Court should construe the term to mean “an underlying, rigid structure on which the porous component is set.” Def. Opening Br. at 17:10-12. Initially, the Court would reject Plaintiffs’ construction and agree with Defendants: “frame” means more than just “a support.”

Plaintiffs’ construction renders the term “frame” superfluous. For example, with Plaintiffs’ construction, Claims 1 and 2 would read: “the porous component is supported by the frame support.” That is simply another way of stating: “the porous component is supported.” Rather than giving effect to all of the terms in the claim, this construction effectively reads “frame” out of Claims 1 and 2, producing an unhelpful tautology where the porous component is “supported by the support.” See *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (“[C]laims are interpreted with an eye toward giving effect to all terms in the claim”); *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A . . . construction that gives meaning to all the terms of the claim is preferred over one that does not do so”) (citing *Elekta Instrument S.A. v. O.U.R. Sci. Int’l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000)). Thus, the Court agrees that “frame” means something more than just “a support.”

Even if “frame” means something more than “a support,” Plaintiffs contend Defendants’ construction inserts a specific structure – “an underlying, rigid structure” – and configuration – “on which the porous component is set” – neither of which is supported by the claim language, specification, or file history. Plaintiffs also argue that Defendants’ construction introduces a new ambiguity: “how rigid does the frame have to be?” Pl. Opening Br. at 7:9-13, 8:9-17.

The Court agrees and disagrees with these arguments. Claims 1 and 2 recite a “porous component supported by the frame.” By contrast, Claim 3 recites “a porous component between the frame and the outlet.” The context in which the patent uses “frame” clearly suggests that the frame need not necessarily embody the particular porous component-atop-frame configuration described in Claims 1 and 2. Indeed, if that is what “frame” meant, much of the language in Claims 1 and 2 would be superfluous. For example, Claim 1 now recites: “the atomizer includes a frame; the porous component is supported by the frame.” Accepting Defendants’ construction, the first part of the quoted language would read: “the atomizer includes an underlying, rigid structure on which the porous component is set.” That construction renders the second half of the quoted language superfluous. Thus, the Court would reject a construction requiring a porous component-atop-frame configuration. See *Digital-Vending Servs. Int’l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270 (Fed. Cir. 2012) (where certain claims required that “registration server” be “free of content managed by the architecture,” while others only required a “registration server”

<sup>10</sup> Again, Plaintiffs lead by arguing that “frame” need not be construed. But because failing to construe frame would not resolve a dispute over claim scope, the Court rejects that suggestion. *O2 Micro*, 521 F.3d at 1360-61.

without further limitation, claim language and structure strongly implied that “registration server,” standing alone, did “not inherently mean a server that is free of managed content”).

While rejecting a construction requiring a particular configuration, the Court would agree with the other aspect of Defendants’ definition: that “frame” means a “rigid structure.” As Defendants point out, structural frames typically come in two forms: (1) a structure that encases or surrounds an object (*e.g.*, a window frame), or (2) a rigid structure that underlies or supports an object (*e.g.*, the frame on a house). The ‘742 patent describes the latter type, explaining that “the porous component [81 is] set on” and “supported by the frame [82].” ‘742 patent, at 5:44-45, 6:20. It also teaches no other purpose for the “frame.” So, the ‘742 patent identifies the “frame” as a firm structure designed to hold up another component. While the term “rigid” introduces some measure of ambiguity, it must be read, in light of the specification and prosecution history, *Nautilus, Inc. v. Biosig Instruments, Inc.*, \_\_\_ U.S. \_\_\_, 134 S. Ct. 2120, 2129 (2014), as something like “firm enough to bear the porous component,” or resistant to changes in form, *see e.g., Millipore Corp. v. W.L. Gore & Associates, Inc.*, 750 F.Supp.2d 253, 269 (D. Mass. 2010), rather than requiring some absolute measure of rigidity. *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (“Stryker also argues that the district court’s exclusion of ‘sharp corners or sharp angles’ renders the construction insufficiently definite, since the court did not specify precisely how ‘sharp’ is too sharp. However, a sound claim construction need not always purge every shred of ambiguity. The resolution of some line-drawing problems – especially easy ones like this one – is properly left to the trier of fact.”).<sup>11</sup>

Thus, the Court would partly adopt Defendants’ construction. “Frame” means: “a rigid structure.”

3. “housing” (‘742 patent, claims 2-3; ‘331 patent, claims 1-2; ‘628 patent, claims 1-2, 4, 7-8; ‘957 patent, claims 1-2, 5, 10, 23)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, “a casing”	“a one-piece shell”

Most independent claims in each of the patents-in-suit include the term “housing.” *See* Docket No. 49-1, Second Revised Joint Claim Construction Statement (“SRJCCS”), ¶ 3. By way of example, Claim 2 of the ‘742 patent recites:

2. An electronic cigarette, comprising:
  - a batter assembly and an atomizer assembly within a **housing** with the battery assembly electrically connected to the atomizer assembly;
  - a liquid storage component in the **housing**;
  - with the **housing** having one or more through-air-inlets . . . .

‘742 patent, at 6:27-31. Similarly, Claim 1 of the ‘331 patent recites:

1. An electronic cigarette comprising:
  - a **housing**;
  - a mouth piece on the **housing**;
  - an air inlet leading into the **housing**;
  - a battery within the **housing**;

<sup>11</sup> Along with the specification and claim language, Defendants’ rigidity limitation also finds support in Plaintiffs’ dictionary definitions, Docket No. 49-1 ¶ 2, and at least one other court’s interpretation as: “a rigid support structure capable of having material attached to it,” Docket No. 46-4, Declaration of Richard T. Mulloy, Ex. 3 at 8-9.

an electronic circuit board within the **housing**  
 a sensor within the **housing**  
 an atomizer within the **housing**  
 a stream passage within the **housing** leading from the inlet to the atomizer . . . .

‘331 patent, at 4:66-5:9.

Both parties agree the patents use “housing” and “shell” interchangeably. The dispute here is over whether “housing” should be limited to a “*one-piece* shell,” or instead, whether it should be understood simply as a “housing,” “shell,” or “casing,” without further limitation.

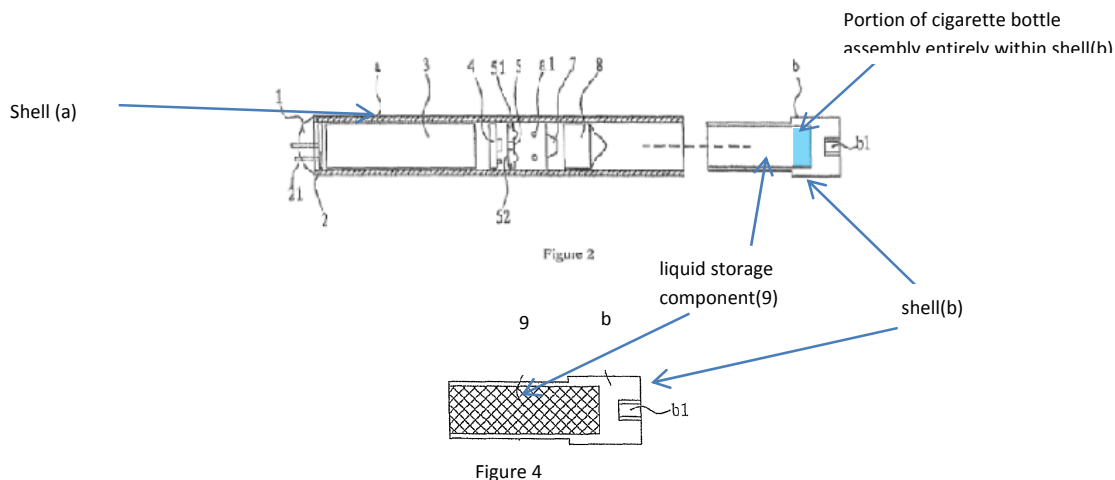
Initially, the Court agrees with Plaintiffs that the term “housing,” standing alone, suggests nothing about the number of constituent parts used to construct the housing. Pl. Opening Br. at 10:19-11:2 & n.34. And Defendants point to nothing in the claim language or structure limiting “housing” to a one-piece device, or to anything claim-specific indicating that a POSITA would read “housing” in a specialized manner. “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. “[U]nless compelled to do otherwise, a court [typically] will give a claim term the full range of its ordinary meaning as understood by an artisan of ordinary skill.” *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). Here, these principles tend to tilt toward Plaintiffs’ construction (or non-construction). *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1361 (Fed. Cir. 2013) (“If the claim term has a plain and ordinary meaning, our inquiry ends”).

Rather than relying on the claim language, Defendants draw their “one-piece” limitation from the ‘742, ‘957, ‘331, and ‘628 patents’ specifications. First, they point to the ‘742 patent, which, in describing the first preferred embodiment, states that components are “installed inside the integrally formed shell [or housing] (a) to form a one-piece part.” Def. Opening Br. at 21:2-4 (citing ‘742 patent, at 3:42-45). But the very same column – indeed, the same sentence – cuts against Defendants’ position. If, as Defendants argue,<sup>12</sup> “integrally formed” means “made of one piece,” the quoted phrase, “integrally formed shell,” is redundant. Accepting Defendants’ view, “integrally formed shell(housing)” means “a one-piece shell made of one piece.” See *Phillips*, 415 F.3d at 1314 (“[T]he claim in this case refers to ‘steel baffles,’ which strongly implies that the term ‘baffles’ does not inherently mean objects made of steel”); *Acumed*, 483 F.3d at 807 (where description of preferred embodiment modified “traverse” with “perpendicular,” finding that “this usage of language is strong evidence that the patentee considered ‘transverse’ and ‘perpendicular’ to have distinctly different meanings”) (citing *Phillips*, 415 F.3d at 1315).

But perhaps more to the point, the specification describes multiple “shells” – shell (a) and shell (b) – that are combined to form a unitary whole. Describing the first preferred embodiment, the ‘742 patent states: “the battery assembly and atomizer assembly are mutually connected and then installed inside the integrally formed shell(a) to form a one-piece part.” ‘742 patent, at 3:42 -44. Continuing, the description explains that the “cigarette bottle assembly includes a hollow cigarette holder shell (b), and a perforated component for liquid storage (9) inside the shell (b).” *Id.* at 3:49-51. Then, the description explains that “[o]ne end of the cigarette holder shell (b) plugs into the shell (a)” to form a unitary whole. *Id.* at 3:57-58. This is also illustrated in Figures 1, 2, and 4. Thus, the specification describes two “shells” being fit together to form the housing. Further, while the description explains that the “cigarette bottle assembly” includes detachable shell (b) (as depicted below in Figure 2), see *id.*, at 3:49-51,

<sup>12</sup> See SRJCCS ¶ 5 (arguing that “integrally formed” means “made of one piece”).

Claim 1 states that the “cigarette bottle assembly is detachably *located in one end of the shell*, and fits with the atomizer assembly inside it.” *Id.* at 6:12-14; *see also id.*, at 2:35-36 (“The cigarette bottle assembly is located in one end of the shell, which is detachable”). In other words, once fit together to form a unitary whole, both shells – (a) and (b) – are “the shell.” In addition, Claim 2 describes a “liquid storage component in the housing.” *Id.* at 6:31. The specification and Figure 4 identify the “component for liquid storage (9) [as] inside the shell (b).” *Id.* at 3:50-51 & Figure 4. If the liquid storage component is both inside of detachable shell (b), *id.*, and inside of the housing, *id.*, at 6:31, which, Defendants concede, also includes shell (a), *see* Def. Opening Br. at 22:26-23:1, then “housing” should not mean “a one-piece shell.”<sup>13</sup>



The Court should reach the same conclusion for the remaining patents. The ‘957 patent claims two “ housings”: a “battery assembly housing,” and an “atomizer assembly housing.” *See* ‘957 patent, at 5:52-6:24. Nothing in the ‘957 patent limits – or even discusses – the number of pieces used to create these housings. Indeed, there is no reference to any of the housings being “integrally formed.” Nonetheless, Defendants argue that “housing” must mean a one-piece shell because “the figures of the ‘957 patent depict two unitary shells” for the battery-assembly and atomizer housings. Def. Opening Br. at 21:19-22:5. But it is not really possible to conclude that from the two-dimensional figures shown, most of which are cut-away views.

Further, where “the plain language of the claim [is] clear and uncontradicted by anything in the written description or the figures,” the Federal Circuit prohibits courts from relying on “the written description [or] figures . . . to add limitations to the claim.” *Liquid Dynamics Corp. v. Vaughan Co.*, 355 F.3d 1361, 1368 (Fed. Cir. 2004); *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374 (Fed. Cir. 2008) (explaining that courts should not import “claim limitations from a few specification statements or figures . . . particularly if those specification extracts describe only embodiments of a broader claimed invention”); *MBO Labs., Inc. v.*

<sup>13</sup> The Court also notes that a portion of the cigarette bottle assembly, which the specification describes as “located in one end of the shell,” ‘742 patent, at 2:35-36, is entirely in shell (b) when shells (a) and (b) are combined (see the blue-shaded portion of Figure 2). If the housing includes shell (a) but not shell (b), as Defendants seem to argue, then the claim language is inconsistent with the specification and a disclosed embodiment. “[A] claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.” *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007).

*Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007) (“The patent figures all depict the flange connected mainly to the outside, but patent coverage is not necessarily limited to inventions that look like the . . . figures”); *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1342 (Fed. Cir. 2001) (“[D]rawings are not meant to represent ‘the’ invention or to limit the scope of coverage defined by the words used in the claims”). That is just what Defendants are inviting the Court to do here; and here, it is not even clear that the drawings in fact show “unitary” shells. The Court declines the invitation.

The Court likewise declines Defendants’ invitation to import perceived limitations from the ‘331 and ‘628 patent specifications into the term “housing.” Defendants cite singular (as opposed to plural) language from ‘331/’628 specifications, and diagrams purportedly showing a one-piece shell, to argue that housing means “a one-piece shell.” Def. Opening Br. at 21:7-18 (citing ‘331 and ‘628 patents, at 2:34-37 & Figures 1-3). But, again, nothing in the ‘331 or ‘628 patents limits – or even discusses – the number of pieces used to construct the housing. And even if the figures depict a one-piece housing – a point Plaintiffs cogently dispute, Pl. Resp. Br. at 19:8-18 – that would not justify importing Defendants’ “one-piece” limitation.

Thus, the Court would reject Defendants’ “one-piece shell” construction. Having done so, the remaining question is whether adopting Plaintiffs’ alternate construction – “a casing” – would achieve anything meaningful. As the parties only really dispute whether “housing” should be limited to a *one-piece* structure, the Court does not believe that further construction would be useful. *See also Webster’s New World Dictionary, Third College Edition* 217 (Neufeldt ed., Simon & Schuster, Inc. 1988) (1970) (defining “casing” as, among other things, “a protective covering”); *id.* at 655 (defining “housing” as, among other things, “a shelter; covering”).

Therefore, the Court would hold that “housing” need not be construed, other than to specify that it need not be a “one-piece shell.”

### 3. “integrally formed” (‘742 patent, claim 1)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, “formed by parts that make up a whole”	“made of one piece”

For the reasons discussed above in connection with the “housing” term, the Court would reject Defendants’ construction and adopt Plaintiffs’: “integrally formed” means “formed by parts that make up a whole.”

### 4. “inlet” (‘742 patent, claims 1-3; ‘331 patent, claims 1-2; ‘628 patent, claims 1, 7-8)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, “an opening for air intake”	“opening in the external wall of the housing for air intake”

Several independent claims of the patents-in-suit call for an “inlet.” *See* SRJCCS ¶ 4. By way of example, Claim 1 of the ‘742 patent recites:

1. An aerosol electronic cigarette, comprising:  
a battery assembly, an atomizer assembly and a cigarette bottle assembly, and a shell that is hollow and integrally formed;

\*\*\*

the shell has through-air-**inlets** . . .

‘742 patent, at 6:6-15. Similarly, the ‘331 patent recites:

1. An electronic cigarette comprising;  
a housing;

\*\*\*

an air **inlet** leading into the housing . . . .

‘331 patent, at 4:66-5:3.

Both parties agree that “inlet” means “an opening for air intake.” The dispute is over the inlet’s location. Plaintiffs contend that “‘inlet’ does not require a specific location . . . and the claims have no such limitation.” Pl. Opening Br. at 13:19-21. Conversely, Defendants argue that “the ‘inlet’ must be located on the external wall of the housing.” Def. Opening Br. at 25:7-8.

The claim language (and specifications) in every patent indicate that inlets exist to bring air from outside to inside the housing. ‘742 patent, Claim 1 (“the shell has through-air-inlets”), Claim 2 (“the housing having one or more through-air-inlets”), Claim 3 (“the housing having one or more through-air-inlets and an outlet”); ‘331 patent, Claim 1 (“an air inlet leading into the housing”), Claim 2 (“an air inlet for providing air into the housing”); ‘628 patent, Claim 1 (“a housing having a longitudinal axis, an inlet and an outlet”), Claim 7 (“a housing having an inlet and an outlet”), Claim 8 (same). Citing the ‘742 patent, Defendants argue that the claims also “require that the claimed . . . *housing itself* have an inlet.” Def. Opening Br. at 25:17-18 (emphasis added). But saying that the housing must have an inlet is different than saying that the inlet must be in the housing’s external wall. And, in fact, the claims are unclear on that front.

For example, the ‘331 patent recites only “an air inlet leading into the housing.” Similarly, the ‘628 patent recites “a housing having an inlet and an outlet.” Neither formulation requires that the inlet appear at any specific location, or precludes, for example, an inlet at the front opening or a joint of the housing; instead, they only require that the housing have *some* opening for air intake. Even the ‘742 patent, which is the one most favorable to Defendants (and the only one they quote), states only that “the shell has through-air-inlets,” not that the inlets *must* appear in the shell’s external wall. Based only on the claim language, the housing could have “through-air-inlets” located at the front and back or at a juncture between two parts, so long as they are inlets into the shell. In short, the claim terms do not support Defendants’ position.

Rather than the claim terms, Defendants’ construction finds its strongest parallel in the specifications, which repeatedly describe inlets in the external wall of the housing. ‘331 patent, Abstract (“The external wall of the shell has an air inlet”); *id.*, at 2:33-34 (“As shown in FIG.1, an air inlet (4) is provided on the external wall of the shell (14)”); ‘628 patent, at 1:56-59, 2:31-33; ‘742 patent, at 2:38-39 & Abstract (“The shell[a] has through-air-inlets (a1)”). But, disclosed embodiments notwithstanding, nothing in the specifications indicate that an inlet somewhere other than the external wall of the housing is at odds with the claims. The specifications make clear that air must enter the housing somewhere. But they do not give special import to air entering the housing through its external wall, as opposed to any other possible location.

Ultimately, then, the Court would agree with Plaintiffs. Rather than using the specification to illuminate claim terms, Defendants are attempting to import limitations from disclosed embodiments to restrict the broader claim language. Again, that is not allowed. *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009) (“When consulting the specification to clarify the meaning of claim terms, courts must take care not to import limitations into the claims from the specification”); *Phillips*, 415 F.3d at 1323.

Therefore, the Court would agree with Plaintiffs that “inlet” either needs no construction, or that it means, simply, “an opening for air intake,” without requiring a specific location.

## 5. “a mouthpiece on the housing” (‘331 patent, claims 1-2)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, for “mouthpiece,” “the part of an electronic cigarette that is placed at or in the user’s mouth”	“a structure that is adapted to be gripped by the user’s mouth and that is attached on the housing”

Claims 1 and 2 of the ‘331 patent recite:

1. An electronic cigarette comprising;  
a housing;  
**a mouth piece on the housing . . . .**

See ‘331 patent, at 4:66-5:1, 5:17-19.

The dispute here is two-fold: (1) whether the “mouth piece” is a piece specially-designed to be gripped by a user’s mouth, and (2) whether it is separately attached to the housing, rather than a part of the housing on which a user places his or her mouth. Plaintiffs would construe the term “mouth piece” as simply “the part of an electronic cigarette that is placed at or in the user’s mouth.” Defendants would construe the term as “a structure that is adapted to be gripped by the user’s mouth and that is attached on the housing.” At the hearing, both parties clarified their agreement that the “mouth piece” need not be detachable from the housing.

Starting with the claim language, Claims 1 and 2 recite a “housing” and, separately, “a mouth piece on the housing.” A basic rule of claim construction states that, wherever possible, courts must construe claims “with an eye toward giving effect to all terms in the claim.” *Bicon*, 441 F.3d at 950; *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1354 (Fed. Cir. 2012); *Cat Tech LLC v. TubeMaster, Inc.*, 528 F.3d 871, 885 (Fed. Cir. 2008). Plaintiffs’ construction contravenes this principle as it reads “a mouth piece on” as just another way of saying “a part of the housing,” albeit a part of the housing that becomes a “mouth piece” when “placed at or in the user’s mouth.” See Pl. Resp. Br. at 24:7-11 (“Defendants assert that Fontem’s proposed construction reads out ‘mouthpiece’ and ‘on the housing’ from the claims because ‘it covers any part of a cigarette that touches the user’s mouth.’ But just because every electronic cigarette would have some portion that interacts with a user’s mouth does not mean that ‘mouthpiece’ is not a meaningful limitation.”); *Primos, Inc. v. Hunter’s Specialties, Inc.*, 451 F.3d 841, 848 (Fed. Cir. 2006) (“Starting with the language of claim 21, the terms ‘engaging’ and ‘sealing’ are both expressly recited in the claim and therefore ‘engaging’ cannot mean the same thing as ‘sealing’; if it did, one of the terms would be superfluous”). Plaintiffs’ construction also contravenes another basic claim construction principle: that different words typically mean different things. *Chicago Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012); *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000). Under Plaintiffs’ construction, a single part of the electronic cigarette would be both “the housing” and “a mouth piece on the housing” when “placed at or in the user’s mouth.” See Pl. Resp. Br. at 23:18-20 (arguing that the “claimed ‘mouth piece on the housing’ can be either part of the housing or not”). In addition, Plaintiffs’ construction makes little grammatical sense. A person trying to achieve their construction would write something to the effect of: “a portion of the housing interacts with the user’s mouth.” He or she would not claim a separate “piece on” the housing. The claim language therefore strongly supports Defendants’ argument that a

“mouth piece on the housing” means a structure specially adapted to be gripped by a user’s mouth (“mouth piece”) – not simply an otherwise undifferentiated part of the housing.

The specification further confirms this construction. The abstract states: “An electronic cigarette includes a shell *and* a mouthpiece.”

‘331 patent, Abstract. The diagrams depict a “mouthpiece” separate from the housing, *see id.*, Fig. 1; the specification consistently refers to a “mouthpiece” separate from the housing, *e.g.*, *id.*, at 1:56-58; and, perhaps most tellingly, the specification explains: “The *mouthpiece (15)* is threaded. When the nicotine solution in the liquid-supplying bottle (11) is used up, *users can screw the mouthpiece (15) out* to take the liquid-supplying bottle (11) out, refill the liquid-supplying bottle (1) with the nicotine solution, put the liquid-supplying bottle (11) into the shell (14) again, *and then screw the mouthpiece,*” *id.*, at 3:65-4:3 (emphasis added); *see also id.*, at 4:45-47 (explaining that mouth piece has the same function in the second of two disclosed embodiments). In short, the specification makes explicit what the claim language strongly implies: the “mouth piece” is a specially-adapted component, not simply the terminus of the housing.<sup>14</sup> Consistent with the claim language, and ordinary meaning, the specification also makes clear that the “mouth piece” is adapted to be gripped and sucked by the user’s mouth.

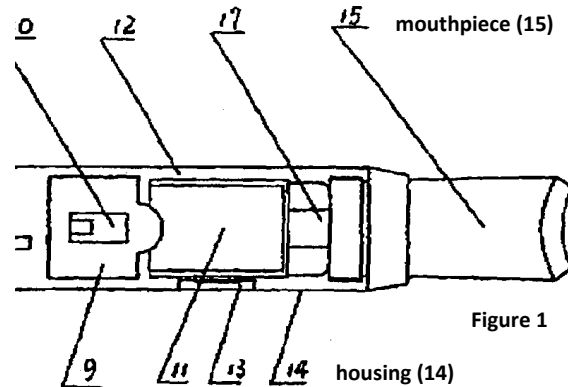


Figure 1

Plaintiffs cite dictionary definitions for the word “on,” contending that “on the housing” does not necessarily mean separate from the housing. Pl. Resp. Br. at 23:21-24:2. They also cite the specification’s use of the phrase “bulge (36) on the atomizer (9),” asserting that because the bulge is not a separate piece from the atomizer, this phrasing indicates that the patent uses the word “on” to mean an indistinct part. *See id.* at 24:3-6 (citing ‘331 patent, at 3:61-63 & Figs. 1, 6). While the specification contradicts Plaintiffs’ arguments by referring to the mouthpiece as a separate part from the housing and by indicating that “users can screw the mouthpiece (15) out,” *See* ‘331 patent, Abstract, 1:56-58, 3:65-4:3 & Fig. 1, Defendants seem to agree that the mouth piece need not be a separate piece, but rather, can be a permanent part of the housing.

Plaintiffs also argue that the Court should adopt its construction because, in a request for *inter partes* review, defendant NJOY, Inc. “asserted that the [unadorned] end of an electronic cigarette meets this limitation.” Pl. Resp. Br. at 15:19-22. But, as Defendants correctly argue, the *inter partes* review and *Phillips* standards differ significantly. *Virginia Innovation Scis., Inc. v. Samsung Electronics Co.*, 983 F.Supp.2d 713, 765 (E.D. Va. 2014) (“In determining whether to institute IPR, the PTAB must determine whether, using the *broadest reasonable interpretation* of the claim terms, the petitioner has demonstrated that there is a *reasonable likelihood* of the patent claims being found invalid by a preponderance of the evidence. In contrast, when construing a disputed patent’s claim terms, the Court adopts a construction based on what a [POSITA] would understand the claims to mean as of the time of invention.”) (emphasis in original, citations omitted); *In re Am. Acad. Of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir.

<sup>14</sup> The specification also uses a similar construction when referring to the “spring piece.” ‘331 patent, at 4:43 & Fig. 2. In both cases, it appears that the term “piece” is synonymous with a separate “part” – the “mouth piece” being a part for drawing air through the inlets and sucking out aerosols, ‘331 patent, at 3:15-61, and the spring piece being for “pressing the liquid-supplying bottle on the atomizer,” ‘331 patent, at 4:43

2004); *see also Google, Inc. v Whitserve, LLC*, No. IPR2013-249, Paper 32, Pat. App. LEXIS 6000, at \*28-\*29 (P.T.A.B. September 9, 2014) (“Finally, even if the Federal Circuit had set forth a construction of claims 3, 6, and 9 that differs from ours, we note that the *Computer Packages* appeal was from a district court infringement suit, and therefore applied the claim construction standard articulated in *Phillips* . . . . By contrast, in *inter partes* review proceedings the Board applies the broadest reasonable interpretation consistent with the specification. The Federal Circuit has affirmed prior Board decisions adopting claim constructions that differ from those reached under the standard discussed in *Phillips*.”) (most citations and quotations omitted).

Measured against the appropriate standard, the Court agrees with Defendants: a “mouth-piece on the housing” means “a structure that is adapted to be gripped by the user’s mouth.” In light of the parties’ discussion at the hearing, however, the Court does not find the second half of the construction – “that is attached on the housing” – to be a useful guide, as it suggests that the “mouth piece” is (or at least at some point was) detachable. Further, the “attached on” language is not supported by the specification. Indeed, rather than teaching that the mouth piece is attached to the housing, the specification states that the “mouthpiece 15 [is] sequentially provided within the shell 14.” ‘331 Patent 2:33-36. Thus, the Court would adopt Defendants’ construction with a slight modification: a “mouth piece on the housing” means “a structure that is adapted to be gripped by the user’s mouth.”

6. “a liquid conduction component in contact with the liquid permeating component and the liquid storage component” (‘805 patent, claim 3)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary	“a component that transports liquid from the liquid storage component to the liquid permeating component”

Claim 3 of the ‘805 patent recites:

3. The electronic cigarette of claim 2 further including **a liquid conduction component in contact with the liquid permeating component, and the liquid storage component.** ‘805 patent, at 7:12-15.

Should the Court construe the term, Plaintiffs do not dispute that the “liquid conduction component” is a “component that transports liquid.” Pl. Opening Br. at 16:15-20. The narrow dispute here is over whether the term requires a specific liquid flow path – “from the liquid storage component to the liquid permeating component.” *See* Pl. Resp. Br. at 27:13-21.

The specification teaches that the liquid conduction component exists for a specific purpose: to transport cigarette liquid from a storage area, ultimately, to an electric heater that then atomizes the cigarette liquid into an inhalable vapor. *See* ‘805 patent, at 1:36-45, 1:56-2:3, 4:33-39. The specification describes two embodiments in detail; the first has a liquid conduction component, while the second does not. In describing the first embodiment, the specification identifies a tubular liquid storage component (3) containing cigarette liquid. *See id.*, at 1:40 & Figs. 1-2. The specification then describes a process by which cigarette liquid passes from that liquid storage component (3) to the electric heater (5), where atomization occurs. As the specification explains, a liquid permeating component (6) is sleeved on the electric heater (5). *Id.*, at 2:65-66 & Fig. 4. To get to the electric heater, then, the cigarette liquid must somehow pass from its starting point, the liquid storage component (3), to the liquid permeating component (6), and ultimately to the heater (5). *See id.*, at 1:36-44 (“Cigarette liquid stored in a liquid

storage component permeates into the liquid permeating component. The electric heater interacts with the liquid permeating component, such that the cigarette liquid is atomized[.]”).

The liquid conduction component allows this to happen. As the specification explains, the liquid conduction component (7) is sleeved on the liquid permeating component (6), which, itself, is sleeved on the electric heater (5). *Id.*, at 3:16-18 & Fig. 4. A “conduction part 71 . . . extends from one end of the liquid conduction component (7) in the radial direction, and is contacted with the liquid storage component (3).” *Id.*, at 3:19-22 & Figs. 1A, 3. Acting as a conduit, the liquid conduction component (7) transports the cigarette liquid from the liquid storage component (3) to the liquid permeating component (6), which then transports liquid into the heater (5) for atomization. *Id.*, at 3:22-24 (“As a result, cigarette liquid on the liquid storage component (3) is absorbed and permeated to the liquid permeating component”); *id.*, at 4:33-36 (“The liquid permeating component (6) in the atomizing core component is directly sleeved on the electric heater (5). Cigarette liquid in the liquid storage component (3) is conducted and permeated to the liquid permeating component (6) by the liquid conduction component (7).”). Thus, the specification clearly establishes that “the liquid conduction component” is “in contact with the liquid permeating component and the liquid storage component” for the specific purpose of transporting cigarette liquid from the latter to the former.<sup>15</sup>

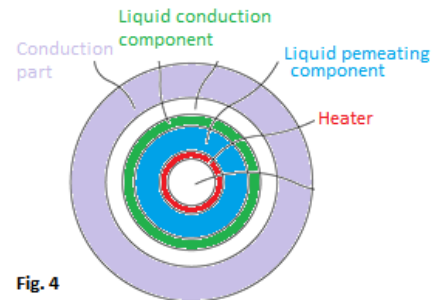


Fig. 4

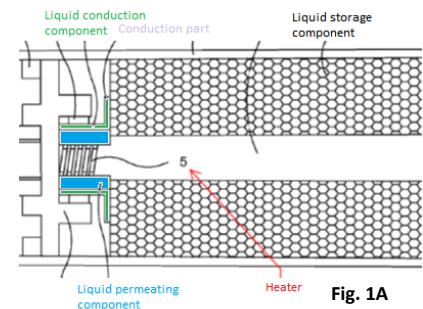


Fig. 1A

Plaintiffs contend the claim language only requires that the liquid conduction component be “in contact with” the liquid storage and liquid permeating components, but that it does not require a specific flow path. Pl. Opening Br. at 16:20-17:2. Thus, they contend, construing this term to include a specific flow path wrongly imports a limitation from a disclosed embodiment. Pl. Resp. Br. at 27:17-21. However, Plaintiffs agree that the phrase “liquid conduction component” means a component that “conduct[s] or transport[s] liquid.” *Id.* at 27:11-13. And nothing in the intrinsic evidence suggests that the liquid conduction component might transport liquid in the opposite direction – away from the heater, to the liquid permeating component, then to the liquid storage component. Indeed, that would be nonsensical in the context of the patent. Instead, the only possible flow path described in the ‘805 patent is from the liquid storage component, where the cigarette liquid starts, to the liquid permeating component (and heater).

Thus, the Court would adopt Defendants’ construction. As both parties agree, “liquid conduction component” connotes a component that transports liquid. Given the specification, a skilled artisan reading the ‘805 patent would understand that the liquid conduction component exists to transport liquid from the liquid storage component to the liquid permeating component (and, ultimately, to the heater). Defendants’ construction captures this understanding, “stays true

<sup>15</sup> This understanding also finds support in the ‘805 patent’s description of the second embodiment. The second embodiment, shown in Figure 6, replaces the liquid conduction component’s function by putting the liquid storage component and liquid permeating component in direct contact. See ‘805 patent, at 4:52-54, 5:6-8 & Fig. 6. By implication, this embodiment shows that the liquid conduction component exist for a specific, albeit replaceable, purpose: getting liquid from the liquid storage component to liquid permeating component, and finally, the heater.

to the claim language[,] and most naturally aligns with the patent's description of the invention." *Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). Thus, the Court would adopt it, albeit with a slight (italicized) modification: "a liquid conduction component in contact with the liquid permeating component and the liquid storage component" means: "a component *capable of transporting* liquid from the liquid storage component to the liquid permeating component."<sup>16</sup>

7. "a liquid permeating component sleeved on the electric heater" ('805 patent, claim 2)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
no construction necessary, or alternatively, "a liquid permeating component fitted around the electric heater"	"a liquid permeating component fitted around and oriented in the same axial direction as the heater"

Claim 2 of the '805 patent recites:

2. The electronic cigarette of claim 1 further including **a liquid permeating component sleeved on the electric heater.**

'805 patent, at 7:10-11.

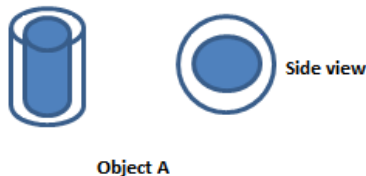
Both parties agree that "a liquid permeating component sleeved on the electric heater" means, at least, "a liquid permeating component fitted around the electric heater." The narrow dispute centers on whether the words "sleeved on" mean "fitted around *and oriented in the same axial direction as the heater*," or just "fitted around the heater." See Pl. Resp. Br. at 25:24-26:2.

The claim language provides little insight into this dispute. And, while the specification depicts a liquid permeating component sleeved around and oriented in the same axial direction as the heater, see '805 patent, Figs. 1A, 4, both parties rely primarily on extrinsic evidence and non-technical examples to support their preferred constructions. Plaintiffs cite *Merriam Webster's Collegiate Dictionary* 1172 (11th ed. 2003), which defines a "sleeve" as a "tubular part . . . designed to fit over another part." Pl. Opening Br. at 18:11-12. In the SRJCCS, Plaintiffs also cite the *Oxford American Dictionary & Thesaurus* 1427 (1st ed. 2003), which defines a "sleeve" as "a tube enclosing a rod or smaller tube." SRJCCS ¶ 7. For their part, Defendants cite similar dictionary definitions, as well as *ProTec, Inc. v. Life-Like Products, Inc.*, which relied on dictionary definitions to define "sleeve" as "a tubular piece fitting over a rod or the like," 986 F. Supp. 27, 33 (D. Me. 1997). See also, e.g., *Halliburton Energy Servs. v. Weatherford Int'l*, No. 07-CV-2144, 2010 U.S. Dist. LEXIS 97674, at \*38-\*39 (N.D. Tex. July 8, 2010) ("The *Oxford English Dictionary* . . . defines 'sleeve' as: 'A tube, or hollow shaft, fitting over or enclosing a rod, spindle, etc., and designed to protect or strengthen it, or to connect one part with another.' The *Random House Webster's Unabridged Dictionary*, as relevant here, defines 'sleeve' as: 'a tubular piece, as of metal, fitting over a rod or the like.'"). In Defendants' view, an axial limitation "simply recognizes that the plain and ordinary meaning of 'sleeved on' requires that the sleeve and the sleeved object are oriented in the same direction." Def. Resp. Br. at 18:25-16.

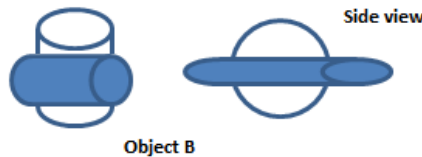
The Court would agree with Defendants. Plaintiffs emphasize that dictionaries merely define a sleeve as a part "fit[ting] over" another part, without specifying an axial direction. Pl. Opening Br. at 18:11-20; Pl. Resp. Br. at 26:6-14. But they largely gloss over another relevant aspect of the definition – that the sleeve is tubular and designed to fit over another similarly-shaped object. See *Merriam Webster's Collegiate Dictionary* 1172 (11th ed. 2003); *Oxford American Dictionary & Thesaurus* 1427 (1st ed. 2003); *ProTec*, 986 F. Supp. at 33; *Halliburton*

<sup>16</sup> As the Court adopts Defendants' construction, it declines to address Defendants' means-plus-function argument.

*Energy*, 2010 U.S. Dist. LEXIS 97674, at \*38-\*39. Notwithstanding other possible uses of the word “sleeve,” to say that a tubular object is “sleeved on” another object would almost universally be understood to mean that the two objects are oriented in the same axial direction, with the cylindrical “sleeve” being fitted around a narrower object. By way of example, most fair-minded people would say that Object A, below, depicts a sleeved relationship, where the transparent cylinder being “sleeved on” the blue one:



By contrast, the Court doubts that many, if any, fair-minded people would describe as “sleeved” the relationship in Object B:



Yet, Object B arguably depicts a “sleeved” relationship if the word is defined without reference to an axial direction, as the transparent cylinder is “fitted around” the blue cylinder, albeit only because the blue cylinder is jutting sideways through the transparent cylinder’s external wall.<sup>17</sup> At least when referring to tubular sleeves then, as we are here, Defendants’ construction is most consistent with common understanding.<sup>18</sup>

Their construction is also consistent with the way the ‘805 patent uses “sleeved on.” The ‘805 patent describes multiple “sleeved” relationships: “a fastening sleeve (12) can be sleeved on the liquid conduction component (7),” 805 patent, at 3:26-27, the “liquid conduction component (7) is sleeved on the liquid permeating component (6),” *id.*, at 3:16-18, and the “liquid permeating component (6) [is] sleeved on the electric heater,” *id.*, at 2:65-67. Each “sleeved” relationship described in the patent involves one tubular component fitted around another and oriented in the same axial direction. *Id.*, Figs. 1A, 4. Plaintiffs argue that, by looking to the ‘805 patent’s disclosed embodiments, Defendants are trying to import a directional limitation from the specification. But the ‘805 patent’s embodiments merely illustrate the common understanding of a tubular sleeve as one fitted around and oriented in the same direction as the sleeved object.

Thus, the Court would adopt Defendants’ construction: “a liquid permeating component sleeved on the electric heater” means “a liquid permeating component fitted around and oriented in the same axial direction as the heater.”<sup>19</sup>

<sup>17</sup> Similarly, without imposing a directional limitation, an arm could be “sleeved” in a long-sleeved shirt, even if jammed through a tear at a perpendicular angle. But nobody would call that a sleeved relationship.

<sup>18</sup> Plaintiffs have a fair point when they cite what was initially Defendants’ example of a record sleeve. *See* Pl. Resp. Br. at 26:15-20. But, as used in the ‘805 patent, “sleeved on” clearly refers to a tubular sleeve.

<sup>19</sup> As the Court adopts Defendants’ construction, it declines to address Defendants’ means-plus-function argument.

8. “liquid storage component” (‘742 patent, claim 2); “liquid supply” (‘742 patent, claim 3; ‘331 patent, claims 1-2, 5; ‘628 patent, claims 1, 5-8); and “solution storage area” (‘957 patent, claims 1, 2, 8, 10, 23-24)

Claim Term	Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
“liquid storage component”	no construction necessary	“a hollow, walled container for storing liquid”
“liquid supply”	no construction necessary	“liquid-supplying bottle”
“solution storage area”	no construction necessary	“a bottle for storing liquid”

As relevant, Claim 2 of the ‘742 patent recites:

2. An electronic cigarette, comprising:

\*\*\*

a **liquid storage component** in the housing;

\*\*\*

the porous component substantially surrounded by the **liquid storage component**.

‘742 patent, at 6:27-38

Claim 3 of the ‘742 patent recites:

3. An electronic cigarette, comprising:

a batter assembly and an atomizer assembly within a housing . . .

\*\*\*

the atomizer assembly includes a frame having a run through hole, and a porous component between the frame and the outlet;

\*\*\*

with the porous component in contact with a **liquid supply** in the housing.

‘742 patent, at 6:27-38

Exemplary Claim 1 of the ‘331 patent recites:

1. An electronic cigarette, comprising:

a housing

\*\*\*

a **liquid-supply** within the housing; and

\*\*\*

with the **liquid-supply** in physical contact with the atomizer . . . .

‘331 patent, at 4:66-5:11.

Exemplary Claim 1 of the ‘628 patent recites:

1. An electronic cigarette, comprising:

a housing having a longitudinal axis, an inlet and an outlet;

a **liquid supply** in the housing

\*\*\*

an atomizer assembly in the housing between the inlet and the outlet, including:  
a porous body projecting into the **liquid supply** . . . .

‘628 patent, at 4:63-5:3.

Exemplary Claim 1 of the ‘957 patent recites:

1. An electronic cigarette or cigar, comprising:

a. \*\*\*

2. an atomizer, and a **solution storage area** in the atomizer assembly housing . . . .

‘957 patent, at 5:52-65.

As characterized by Defendants, the parties' dispute regarding these terms "boils down to whether liquid must be stored in a hollow, walled container (*e.g.*, a bottle) that is distinct from the shell or housing of the device (Defendants' proposal)," or instead, "whether no construction is needed for these terms (Plaintiffs' position)." Def. Opening Br. at 5:12-15. Defendants assert that a construction in their favor will essentially end the case. Def. Resp. Br. at 3:10-12.

A. "liquid storage component" and "liquid supply" (the '742, '331, and '628 Patents)

Standing alone, the claim language in the '742, '331, and '628 patents provides little support for Defendants' construction. Save Claim 1 of the '742 patent, which recites "a cigarette bottle assembly," none of the patents claim a "bottle" or "hollow, walled container" for storing cigarette liquid. *See generally* '742, '957, '331, and '628 patents; Def. Opening Br. at 5 & n.4.<sup>20</sup>

Indeed, Defendants effectively concede the point by focusing nearly all of their argument on the specification and file history. On that front, Defendants' primary arguments appear to be two-fold. First, the original specifications for the '742, '331, and '628 patents only referred to a "bottle" for liquid storage. During prosecution, however, Plaintiffs' litigation counsel submitted substitute specifications and revised certain claims to remove references to a "bottle." Allegedly to convince the PTO to allow these post-filing amendments, Plaintiffs' counsel represented that the revisions corrected "grammatical and/or translation errors," and that certain newly-added claims were "substantially the same" as claims with a bottle limitation. Given these (mis)representations, Defendants argue, the asserted claims should be viewed in light of the original applications (with the bottle limitations). Def. Opening Br. at 5:19-6:13.

Second, Defendants argue that a bottle is the only type of liquid storage disclosed in the issued specifications. In view of that, they contend that the disputed terms must mean a "bottle" or a "hollow, walled container apart from the shell." *Id.* at 5:19-21; Def. Resp. Br. at 4:8-5:2.

The Court would disagree with Defendants' initial argument – that the Court must view the claims in light of the original applications. Defendants do not dispute the basic principle that "claim construction construes patent claims as issued." *See Regents of Univ. of Cal. v. Micro Therapeutics, Inc.*, No. 03-CV-05669-JW, 2007 WL 5747099, at \*2 (N.D. Cal. June 26, 2007) (also emphasizing that principle is "particularly important [if] there are significant differences between the language of the claim as originally filed and the language of the issued claim."); *cf. Schoenhaus v. Genesco, Inc.*, 440 F.3d 1354, 1359 (Fed. Cir. 2006); *Kistler Instrumente AG v. United States*, 628 F.2d 1303, 1308 (Ct. Cl. 1980) ("[D]efendant's insistence upon this court's reading back into the claims limitations which were originally there and were removed during prosecution of the application through the Patent Office cannot be permitted"). Nor do they dispute that Plaintiffs were entitled to amend the original applications' specifications or claim language, provided that they did not introduce new matter or unsupported claims. *See* 4 Donald S. Chisum, *Chisum on Patents* (2004) §§ 11.04-05, at 11-475, 504. Defendants also do not seem to dispute that the amendments, both to the claims and specifications, broadened language about the liquid storage component to cover more than just a bottle. Def. Opening Br. at 8:12-13 ("the prosecution history evidences an intentional effort to broaden the claims beyond 'bottle'").

<sup>20</sup> By using "bottle" in Claim 1, but not in Claims 2 or 3, the '742 patent's claim language provides some support for Plaintiffs' construction. *Nystrom v. TREX Co.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005) ("When different words or phrases are used in separate claims, a difference in meaning is presumed") (citations omitted). Of course, *Nystrom* also notes that "[d]ifferent terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper." *Id.*

Instead, Defendants' argument rests on the idea that Plaintiffs' counsel misrepresented the substitute specifications and claims as similar to earlier specifications and claims requiring a bottle, causing the PTO to approve late-added changes it would not have otherwise allowed. So, for estoppel-type reasons, Plaintiffs should be held "to their word." Def. Opening Br. at 6:12-13.

In fact, however, the record does not support this argument. Consistent with PTO rules, Plaintiffs' counsel submitted marked-up revisions with the substitute specifications showing the changes they made. *See* Docket No. 39-1, Declaration of Gunnar B. Gundersen ("Gundersen Decl."), Ex. 1 at 21; *id.*, Ex. 5 at 91; Docket No. 47-1, Supp'l Declaration of Lara J. Dueppen, Ex. 1 at 4. And, notwithstanding their characterization of the amendments as "technical" or "insubstantial," Plaintiffs' counsel identified their changes. Gundersen Decl., Ex. 4 at 81 ("New . . . claims 85, 97, and 101 in substance track claims 43, 44, and 59 . . . with . . . 'liquid-supplying bottle' changed to 'liquid supply'"); *id.*, Ex. 5 at 89-90 ("New Claim 32 is similar to Claims 30 and 31 but . . . with the porous component in contact with a liquid supply in the housing, rather than the removable bottle assembly of Claim 30"). Perhaps a wily patent attorney might sneak improper late changes by the PTO by wholly concealing the modifications. But, here, Plaintiffs' counsel was fairly transparent, and the changes were not so complex that the Court might assume the PTO examiner misunderstood them. So the Court agrees with Defendants: Plaintiffs should be held to their word. But that conclusion does not much help Defendants. Despite imbuing their changes with arguably misleading labels, Plaintiffs told the PTO what they were doing.<sup>21,22</sup>

Ultimately, the Court does not really view Defendants' arguments as claim construction arguments. Instead, they are more appropriately characterized as §§ 112 or 132 invalidity attacks. *BIAX Corp. v. NVIDIA Corp.*, No. 09-CV-1257-PAB(MEHx), 2010 U.S. Dist. LEXIS 123777, at \*13-\*14 (D. Colo. June 21, 2010) ("Defendants [contend] the substitute specification improperly introduced 'new matter' to the patent. Therefore, defendants are requesting that, when construing certain claim terms, the Court rely upon the original specification, instead of the substitute specification that became part of the filed patents. [T]he issue of 'new matter' is not appropriately addressed at the claim construction stage."); *Source, Inc. v. Am. Express Co.*, 05-CV-364-TJW, 2007 U.S. Dist. LEXIS 68248, at \*10-\*12 (E.D. Tex. Sept. 14, 2007); *Reiffin v. Microsoft Corp.*, No. 98-CV-266-VRW, 2002 U.S. Dist. LEXIS 21690, at \*18, \*20 (N.D. Cal.

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<sup>21</sup> To the extent Defendants are arguing that the prosecution history demonstrates an express disavowal of claim scope, the Court finds just the opposite. By removing references to a bottle, the prosecution history shows an intent to broaden the claims. *See, e.g., Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 909 (Fed. Cir. 2004) (where patentee removed references to "pressure jackets" during prosecution to cover accused products, omission provided "strong indication that [applicant] intended those claims to reach [products] that did not use pressure jackets"); Def. Opening Br. at 8 ("[T]he prosecution history evidences an intentional effort to broaden the claims beyond 'bottle'").

<sup>22</sup> While not entirely clear, Defendants also seem to argue that the Court should rely on the original application materials because, as of the patent's effective date, "it is clear that [POSITA] would have understood the terms at issue to require a bottle." Def. Resp. Br. at 3:16-4:7 (citing *Schering Corp. v. Amgen, Inc.*, 222 F.3d 1347, 1353 (Fed. Cir. 2000)). But, unlike in *Schering Corp.*, where advances in scientific knowledge led the Court to limit a term to its understanding at the time of invention, here, the Court has no reason to believe that a 2005-vintage POSITA could not differentiate between a "liquid-supplying bottle," on the one hand, and a liquid supply/liquid storage area/solution storage area, on the other. *Cf. Schering Corp.*, 222 F.3d at 1353-54 ("Because, at the time of the '901 application, neither [patentee] nor [POSITA] knew of the existence of, let alone the identity of, the specific polypeptides now identified as subtypes of IFN- $\alpha$ , those subtypes cannot be within the scope of the claims"). Instead, Defendants' argument seems to rest on the premise that a POSITA would only be reading the original applications. But, while a Court considers the meaning of claim terms as a POSITA would understand them on the patent's effective filing date, *Phillips*, 415 F.3d 1303, 1313, it does so in light of the patents actually issued.

Apr. 30, 2002) (explaining that “[c]ourts do not make a determination whether a patent contains new matter at the claim construction stage,” in part, because it could lead to “disregard[ing] the language of the claims as issued” based on a “new-matter” limitation). Whether those attacks have real merit is something the Court should address if §§ 112 or 132 arguments are raised at a later stage.

As to Defendants’ other primary argument – that the specifications only disclose a bottle – the Court largely disagrees. *Compare* Def. Opening Br. at 5:20-21 (“A bottle is the only type of liquid storage disclosed in the specifications of these four patents, both as originally filed and as issued”); Def. Resp. Br. at 3:22-23 *with* ‘742 patent, at 3:49-56 (“[The] cigarette bottle assembly includes a hollow cigarette holder shell (b), and a perforated component for liquid storage (9) inside the shell (b). The perforated component for liquid storage (9) is made of such materials as PLA fiber, terylene fiber or nylon fiber, which are suitable for liquid storage. Alternatively, it may be plastic foam molding or column of multi-layer plates made through plastic injection with polyvinyl chloride, polypropylene and polycarbonate.”); ‘331 patent, at 3:8-15, 3:61-64 (describing “solution storage porous body” made of absorptive materials); ‘628 patent, at 3:6-14, 3:60-63 (same). Further, Defendants seem to be relying on a dictionary definition of “bottle,” without really confronting what the specification teaches about the particular “bottles” that it describes. Indeed, in their one proposed construction that does not use the word “bottle,” Defendants argue that “liquid storage component” should mean “a hollow, walled container for storing liquid,” which sounds much like how one would describe a bottle in common parlance. But the specification teaches that the storage component is not necessarily hollow; rather, it can be filled with a perforated material such as PLA fiber, terylene fiber, nylon fiber, plastic foam, or a column of multi-layer plates. ‘742 patent at 3:49-56.

In any event, even if the Court did agree that the specifications only disclose a bottle, that would not be dispositive. Absent a clear indication that the patentee intended to forego claim scope – the opposite of which is present here – the Court cannot narrow broad claim language by importing limitations from the specification or disclosed embodiments. *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014); *Phillips*, 415 F.3d at 1323; *Gemstar-TV Guide Int’l, Inc. v. Int’l Trade Comm’n*, 383 F.3d 1352, 1366 (Fed. Cir. 2004); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002); *Sjolund v. Musland*, 847 F.2d 1573, 1581 (Fed. Cir. 1988).

In sum, then, the claim terms in the ‘742, ‘331, and ‘628 patents – *as issued* – do not support Defendants’ construction. And rather than showing a disavowal of claim scope, the prosecution history establishes a clear intent to broaden these patents to cover non-“bottle” liquid supplies. Given that, even if the Court accepted Defendants’ argument that a “bottle is the only type of liquid storage disclosed in the specifications . . . as issued,” it cannot rely on limits in the specifications to narrow broader claim language. Therefore, the Court would reject Defendants’ construction. Whether or not Defendants’ arguments are well-taken under §§ 112 or 132 is something to be decided, if at all, when Defendants raise it in the context of summary judgment or trial.

#### B. “solution storage area” (the ‘957 patent)

As with the ‘742, ‘331, and ‘628 patents, none of the disputed terms in the ‘957 patent recites a “bottle” limitation. Nonetheless, Defendants contend the claim language supports their construction. As Defendants argue, independent Claim 1 recites a “solution storage area,” while dependent Claim 8 recites a “fiber material within the solution storage area”; also, independent

Claim 10 recites “a solution storage area with a liquid containing fiber material in the solution storage area.” ‘957 patent. According to Defendants, if “the fiber material and the solution storage area are one and the same, the claims would be meaningless.” Def. Resp. Br. at 5:4-14.

The Court does not find Defendants’ claim language argument persuasive. At best, this argument establishes that the “fiber material” identified in claims 8 and 10 is not the same thing as the “solution storage area.” But there is no flaw in separately listing an area and things that can be in the area. And Defendants do not point to anything in the claim language or structure limiting the solution storage area to a bottle or other hollow, walled container. Indeed, those terms never appear in the claim language. Defendants also do not point to anything in the file history narrowing claim scope. Rather, as they concede, “‘bottle’ was removed from the claim[s]” during prosecution in an effort to *broaden* the claims. Def. Opening Br. at 14:9-18. And again, this argument addresses only the dictionary use of the word “bottle,” and not what that word means in the context of the specification.

Along with their claim language argument, Defendants argue that the “Summary of Invention” limits the ‘957 claims to a “bottle” because it states: “*The present invention includes a battery assembly, an atomizer assembly and a cigarette bottle assembly.*” But, in making this argument, Defendants stretch their cases – *Verizon Servs. Corp. v. Vonage Holding Corp.*, 503 F.3d 1295 (Fed. Cir. 2007), *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312 (Fed. Cir. 2006), and *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340 – past the breaking point. None of those cases holds that one use of the words “the present invention,” standing alone, operates as an express waiver of broader claim language. Rather, each of the cases examined the specification and prosecution history, in addition to any references to “the present invention/system,” before ultimately concluding that the patentee disclaimed a broader claim scope.

In this case, the prosecution history shows just the opposite. As Defendants put it: “the prosecution history of the ‘957 patent . . . reveals a deliberate effort to run away from ‘bottle’ and to add broader claims.” Def. Opening Br. at 13:9-11. In “some circumstances,” the Federal Circuit has found that “a patentee’s consistent reference to a certain limitation or a preferred embodiment as ‘this invention’ or the ‘present invention’ can serve to limit the scope of the entire invention, particularly where no other intrinsic evidence suggests otherwise.” *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1136 (Fed. Cir. 2011). But where, as here, references to “the present invention” are “not uniform, or where other portions of the intrinsic evidence do not support applying the limitation to the entire patent,” the Federal Circuit indicates that references to “the present invention” are “not so limiting.” *Id.*; *Rambus Inc. v. Infineon Technologies Ag*, 318 F.3d 1081, 1094-95 (Fed. Cir. 2003). As applied here, the Court would conclude that a single reference to “the present invention” is insufficient to overcome the broader claim language and clear prosecution history demonstrating an intent to claim more than a bottle.

In their final argument, Defendants assert that the Court must interpret the term “solution storage area” to include a bottle because the claims will otherwise be left unsupported under § 112. While the Court appreciates that claim terms should be construed to preserve validity in cases where that construction is permissible, it may not re-write claim language in order to achieve that end. *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999) (“We have . . . admonished against judicial rewriting of claims to preserve validity”); *Liebel-Flarsheim*, 358 F.3d at 911 (“Accordingly, unless the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous, the axiom regarding the construction to preserve the validity of the claim does not apply”). In any event, “an application need not describe its invention *in haec verba* in order to comply with the description requirement of [§]

112.” *Phillips Petroleum Co. v. U.S. Steel Corp.*, 673 F.Supp. 1278, 1290 (D. Del. 1987), *aff’d*, 865 F.2d 1247 (Fed. Cir. 1989); *Pozen Inc. v. Par Pharm., Inc.*, 696 F.3d 1151, 1167 (Fed. Cir. 2012); *Lampi Corp. v. Am. Power Prods., Inc.*, 228 F.3d 1365, 1378 (Fed. Cir. 2000). At this point, the best that can be said for Defendants is that it is unclear whether their construction would be necessary to preserve the validity of the claims. As a result, the Court rejects Defendants’ validity-preservation argument. If Defendants believe that the term “solution storage area” is unsupported, they can attack validity under § 112 at the appropriate time.

In sum, then, the Court would reject Defendants’ construction. Nothing in the claim language or structure limits “solution storage area” to a bottle or other hollow, walled container. Defendants also identify nothing in the file history narrowing claim scope; rather, they concede that “bottle” was removed to *broaden* the claims. Def. Opening Br. at 14:9-18. Whether a § 112 argument is well-taken is something to be decided, if at all, when Defendants file such a motion.

9. “projecting into” (‘628 patent, claims 1, 6); “extending into” (‘628 patent, claims 7-8)

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary	“having only a portion that protrudes into”

As relevant, Claims 1, 6, 7, and 8 of the ‘628 patent recite:

1. An electronic cigarette, comprising:  
a housing having a longitudinal axis, an inlet and an outlet;  
\*\*\*  
an atomizer assembly in the housing between the inlet and the outlet, including:  
a porous body **projecting into** the liquid supply . . . .
6. The electronic cigarette of Claim 1 with the porous body of the atomizer **projecting into** the liquid supply comprising a porous bulge section.
7. An electronic cigarette, comprising:  
\*\*\*  
a liquid supply in the housing;  
\*\*\*  
an atomizer in the housing between the inlet and outlet, the atomizer including:  
a porous body **extending into** the liquid supply . . . .
8. An electronic cigarette, comprising:  
a housing having an inlet and an outlet;  
\*\*\*  
an atomizer in the housing including: a porous body **extending into** the liquid supply  
. . . .

‘628 patent, at 4:63-6:20.

Plaintiffs argue that these terms do not need construction as they “are easily understood and can be applied by a jury[.]” Pl. Opening Br. at 22:18-20. Defendants ask the Court to construe these terms to mean “having only a portion that protrudes into,” which, Defendants claim, reflects the intrinsic evidence and ordinary meaning. Def. Opening Br. at 31:15-22.

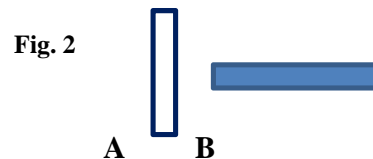
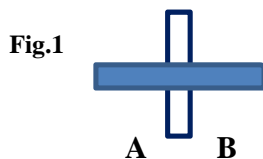
The Court would adopt Defendants’ construction, which is consistent with both the ‘628 patent and the terms’ ordinary, non-technical meanings.<sup>23</sup> The ‘628 patent uses “projecting into” and “extending into” only in the cited claims, and, specifically, only when referring to a porous

<sup>23</sup> Because failing to construe “projecting into” and “extending into” would not resolve a dispute over claim scope, the Court rejects Plaintiffs’ suggestion that it need not construe the terms. *See O2 Micro*, 521 F.3d at 1360-61.

body, included as part of the atomizer, projecting or extending into the liquid supply. *See* ‘628 patent, at Claim 1 (“an atomizer . . . includ[ing] . . . a porous body projecting into the liquid supply”); Claim 6 (“porous body of the atomizer projecting into the liquid supply”); Claim 7 (“an atomizer . . . including . . . a porous body extending into the liquid supply”); Claim 8 (“an atomizer . . . including a porous body extending into the liquid supply”). As the specification explains, the porous body surrounding the atomizer projects/extends into the liquid supply, via a bulge, in order to achieve “capillary infiltration” from the liquid supply. ‘628 patent, at 2:45-47 (“The atomizer (9) is in contact with the liquid supplying bottle (11) via the bulge (36), and the atomization cavity (10) is provided in the atomizer (9)”; *id.*, at 3:61-64 (“The solution storage porous body (28) in the liquid-supplying bottle (11) is in contact with the bulge (36) on the atomizer (9), thereby achieving the capillary infiltration liquid-supplying”; *id.*, at 3:49-53 (“The high speed stream passing through the ejection hole drives the nicotine solution in the porous body (27) to eject into the atomization cavity (10)”; Figs. 1-3, 6. Of course, to do this, the porous body protrudes only partly into the liquid supply; if it were completely in the liquid supply, it could not achieve its function – transmitting nicotine solution from the liquid supply to the atomizer. Thus, as Defendants argue, the specification indicates that the ‘628 patent uses “projecting into” and “extending into” consistently with Defendants’ construction: only partly protruding into.

Plaintiffs argue that Defendants’ reliance on the patent’s specification is an attempt to import limitations from a disclosed embodiment. In fact, however, Defendants are simply highlighting that the patent uses the word as it is normally understood. Saying that something is “projecting into” or “extending into” a space indicates that the “projecting item” is protruding or jutting out from one space into another. *See, e.g., Webster’s New World Dictionary, Third College Edition* 1075 (Neufeldt ed., Simon & Schuster, Inc. 1988) (1970) (defining the verb “project” as “to jut out; protrude”); *Alloc, Inc. v. Pergo, LLC*, No. 00-CV-999-RTR, 2009 U.S. Dist. LEXIS 62881, at \*116 (E.D. Wis. July 2, 2009) (citing dictionary definition and finding that “[p]roject is defined as to ‘extend forward or out,’ and protrude is a synonym”). Once the “projecting item” is entirely within the second space, referring to it as projecting into or extending into that space would no longer be consonant. It would just be in that space.

For example, in Figure 1 below, it would be entirely ordinary to say that the bar was projecting into side B (or for that matter, side A). In Figure 2, however, the bar is no longer projecting or extending into side B; it is there. Saying that the bar was projecting into or extending into side B would be abnormal and inconsistent with the terms’ ordinary meanings; it would also be inconsistent with the ‘628 patent’s non-technical use of the term.



Thus, the Court would adopt Defendants’ construction. “Projecting into” and “extending into” mean “having only a portion that protrudes into.”

*10. “substantially” (‘742 patent, claims 1-2)*

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
no construction necessary, or alternatively, “at	“largely but not completely”

least largely”	
----------------	--

As relevant, Claims 1 and 2 of the ‘742 patent recite:

1. An aerosol electronic cigarette, comprising:

\*\*\*

... with the porous component also positioned **substantially** within the cigarette bottle assembly.

2. An electronic cigarette, comprising:

\*\*\*

the porous component **substantially** surrounded by the liquid storage component.

‘742 patent, at 6:6-38.

Both parties agree that the term “substantially” means “largely,” but they disagree about whether it can also mean “completely.” Citing dictionary definitions and Federal Circuit cases, Plaintiffs argue that substantially means “at least largely,” without necessarily foreclosing “completely.” See Pl. Opening Br. at 24:4-15. Relying on the specification and other Federal Circuit cases, Defendants argue that “[t]here is no reasonable interpretation of ‘substantially’ that [also] includes ‘completely.’” Def. Opening Br. at 33:24-34:16; Def. Resp. Br. at 23:17-25.

The Federal Circuit has construed derivations of “substantially” several times. *Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc.*, 347 F.3d 1314, 1323 (Fed. Cir. 2003) (collecting cases defining “substantially”). In the process, the Court has recognized that the term “can denote either language of approximation or language of magnitude.” See *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1333 (Fed. Cir. 2010) (citing *Deering Precision Instruments*, 347 F.3d at 1323). When used as a term of magnitude – *i.e.*, to denote an amount that is not insubstantial – as the term is used here, the Federal Circuit has repeatedly adopted constructions consistent with Defendants’. *E.g.*, *Aventis Pharm. Inc. v. Amino Chemicals Ltd.*, 715 F.3d 1363, 1377 (Fed. Cir. 2013) (construing “substantially” as “largely but not wholly”); *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572-73 (Fed. Cir. 1996) (explaining that “substantially ordinarily means considerable in extent, or largely but not wholly that which is specified,” and affirming construction that conveyed substantial as, essentially, “most of”) (citations and quotations omitted). Indeed, Plaintiffs’ lead case recognizes this, though it ultimately adopted a modified construction in light of unusual phrasing (“substantially completely”).<sup>24</sup> *LNP Eng’g Plastics, Inc. v. Miller Waste Mills, Inc.*, 275 F.3d 1347, 1354 (Fed. Cir. 2001) (“The meaning of the word ‘substantially’ is ‘largely but not wholly that which is specified’”) (citing dictionary definitions and *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367-69 (Fed. Cir. 2001) (construing “substantially” as “largely but not wholly”; also stating: “ordinarily ‘substantially’ means ‘considerable in extent,’ or ‘largely but not wholly that which is specified’”) (quoting *York Prods.*, 99 F.3d at 1573)).

While there is certainly language in Federal Circuit cases supporting Plaintiffs’ construction, this Court finds the cases adopting Defendants’ construction to be more apt. See also, *e.g.*, *Fujitsu Ltd. v. Tellabs Operations, Inc.*, 821 F. Supp. 2d 1009, 1056 (N.D. Ill. 2011) (“The court, therefore, adopts the ordinary and customary meaning of ‘substantially’ set forth by the Federal Circuit in *Ecolab* and construes the terms ‘substantially even/flat’ to mean ‘largely, but not wholly flat/even’”); *Toro Co. v. Ingersoll-Rand Co.*, 545 F.Supp.2d 933, 947 (D. Minn. 2008) (construing “substantially as “largely but not wholly”); *Foremost in Packaging Sys. v.*

<sup>24</sup> See *C.E. Equip. Co. v. United States*, 17 Cl. Ct. 293, 298-99 (1989) (recognizing distinction between “substantially” and “substantially completely”).

*Cold Chain Techs.*, No. 05-CV-24-JVS(MLGX), 2005 WL 6300783, at \*18 (C.D. Cal. Nov. 21, 2005) *aff'd sub nom. Foremost in Packaging Sys., Inc. v. Cold Chain Techs., Inc.*, 485 F.3d 1153 (Fed. Cir. 2007) (“The Court finds that ‘substantially’ is in an ideal embodiment commonly understood to mean ‘virtually entirely,’ but actually means something less, like ‘largely but not necessarily wholly’”).

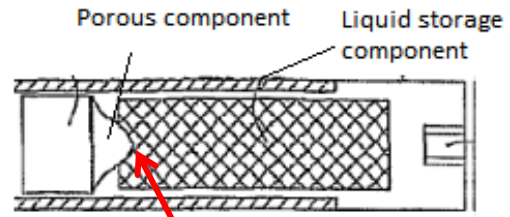
Defendants’ construction – largely, but not completely – is also consistent with the ‘742 patent’s use of the term.<sup>25</sup> The ‘742 patent describes embodiments where the “porous component” (of the atomizer) is partly, but not completely, extending into the liquid storage area. ‘742 patent, at 3:15-19 & Figs. 1, 5 (“One end of the porous component fits with the cigarette bottle assembly .

... [T]he porous component has a protuberance on the other end, and the protuberance fits with the cigarette bottle assembly”).

While Plaintiffs argue that references to the specification seek to import limitations from the disclosed embodiments, the specification just confirms

that the ‘742 patent uses “substantially” in its ordinary sense: as a quantity term denoting an amount that is not insubstantial, but also less than completely.

The Court would adopt Defendants’ construction: “largely but not completely.”<sup>26</sup>



#### IV. Conclusion

For the reasons discussed above, the Court would adopt the following constructions:<sup>27</sup>

Term	Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction	Court’s Construction
“cavity”	no construction necessary, or alternatively, “a hollow space”	“a hollow space within and completely surrounded by the body of the atomizer”	“a hollow space”
“frame”	no construction necessary, or alternatively, “a support”	“an underlying, rigid structure on which the porous component is set”	“a rigid structure”
“housing”	no construction necessary, or alternatively, “a casing”	“a one-piece shell”	“housing” (no construction)

<sup>25</sup> Indeed, Plaintiffs do not dispute that the ‘742 patent only discloses embodiments where items described as “positioned substantially within” are positioned partly, but not completely, within. Pl. Resp. Br. at 30:9-15.

<sup>26</sup> At the hearing, Plaintiffs suggested that, while the Court’s “substantially” definition may work in the ‘742 patent, it may not work in others. Plaintiffs offered the example of the ‘628 patent, which recites “a heating wire in the atomizer having a central axis oriented *substantially* perpendicular to the longitudinal axis of the housing.” ‘628 patent, Claim 1. The parties asked the Court to define substantially as it appears in Claims 1 and 2 of the ‘742 patent, not any other patent. Whether the definition would be the same across all patents was not before the Court.

<sup>27</sup> The Court agrees with Plaintiffs’ position that the recent USPTO proceedings have no impact on this motion. See Docket No. 61, Plaintiffs’ Response Regarding Effect of IPR Decision on Claim Construction.

“integrally formed”	no construction necessary, or alternatively, “formed by parts that make up a whole”	“made of one piece”	“formed by parts that make up a whole”
“inlet”	no construction necessary, or alternatively, “an opening for air intake”	“opening in the external wall of the housing for air intake”	“an opening for air intake”
“a mouthpiece on the housing”	no construction necessary, or alternatively, for “mouthpiece,” “the part of an electronic cigarette that is placed at or in the user’s mouth”	“a structure that is adapted to be gripped by the user’s mouth and that is attached on the housing”	“a structure that is adapted to be gripped by the user’s mouth”
“a liquid conduction component in contact with the liquid permeating component and the liquid storage component”	no construction necessary	“a component that transports liquid from the liquid storage component to the liquid permeating component”	“a component capable of transporting liquid from the liquid storage component to the liquid permeating component”
“a liquid permeating component sleeved on the electric heater”	no construction necessary, or alternatively, “a liquid permeating component fitted around the electric heater”	“a liquid permeating component fitted around and oriented in the same axial direction as the heater”	“a liquid permeating component fitted around and oriented in the same axial direction as the heater”
“liquid storage component”	no construction necessary	“a hollow, walled container for storing liquid”	“liquid storage component” (no construction)
“liquid supply”	no construction necessary	“liquid-supplying bottle”	“liquid supply” (no construction)
“solution storage area”	no construction necessary	“a bottle for storing liquid”	“solution storage area” (no construction)
“projecting into” “extending into”	no construction necessary	“having only a portion that protrudes into”	“having only a portion that protrudes into”
“substantially”	no construction necessary, or alternatively, “at least largely”	“largely but not completely”	“largely but not completely”